



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/518,343

01/05/2005

Yves Fouillet

122001

5207

25944

7590

05/29/2009

OLIFF & BERRIDGE, PLC

P.O. BOX 320850

ALEXANDRIA, VA 22320-4850

EXAMINER

LEVKOVICH, NATALIA A

ART UNIT

PAPER NUMBER

1797

MAIL DATE

DELIVERY MODE

05/29/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/518,343	Applicant(s) FOUILLET ET AL.	
	Examiner NATALIA LEVKOVICH	Art Unit 1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 February 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 22-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 22-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. Applicant's amendments and remarks filed on 02/02/2009 have been acknowledged.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office Action.

Drawings

3. The drawings remain objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims, as well as any structural detail that is essential for a proper understanding of the disclosed invention. Therefore, the micro-fluidic structure having the trapping chambers which communicate ONLY with the ducts (that is, not connected to any other chambers or channels), must be clearly shown or the feature(s) canceled from the claim(s). No new matter should be entered. Currently, all of the drawings, including Figures 1-3, 7-8 and 14, show trapping chambers 81, 82 being in communication not only with ducts 41, 42, but also with expansion chambers 61, 62 and operative cavity 3.

Claim Rejections - 35 USC § 112

Art Unit: 1797

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 27-30 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 27, as amended, recites the fluidic device further comprising the first and second capillary valves, in addition to the plurality of valves ['valve bodies'] recited in claim 22. Upon further reviewing the original specification, Examiner found no support for this feature. Nowhere the original specification discloses three valves being arranged along the portion of the fluidic path between one of the ducts and the operative cavity.

6. Claim 22-36 are rejected under 35 U.S.C. 112, second paragraph, as being unclear for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With respect tot the amended claim 22, it is unclear how the components recited in line 2 are structurally inter-related with the chambers, means for heating, operative cavity, etc. The repetitive use of the expression "support comprising" in lines 1-2, is redundant and confusing, because it is not clear whether or not the claim defines and then redefines the structure of the fluidic device.

In reference to claim 24, it remains unclear from the language of the claim what structural features of the capillary valves would provide for generating the overpressure at the interface “that opposes any displacement of the liquid beyond the valve, against the overpressure”.

In claim 25, it is not clear how the base of each capillary valve is structurally related to the valve body of claim 22.

Regarding claim 26, it remains unclear how the isolating means are inter-related with the valve bodies of claim 22.

Regarding claim 27, as amended, it is not clear how the first and second capillary valves are structurally inter-related with the plurality of valves [‘valve bodies’] recited in claim 22.

In claim 28, the “two connecting channels” lack antecedent basis. It is unclear whether or not the “connecting channels” are the same as the “distinct channels” of claim 22. Additionally, it is not clear how the trapping chambers can be connected to the expansion chamber, if claim 22 sets forth the trapping chambers as being connected ONLY to the respective ducts.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

Art Unit: 1797

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 22-36 are rejected under 35 U.S.C. 102(a) and (e) as anticipated by Mian (US 20010055812).

In reference to claims 22--32, 34 and 36, Mian discloses micro-fluidic test devices comprising a platform configured for rotation (see Figure 1-C). The platform includes a plurality of fluidic circuits. The fluidic circuits can have various structures, depending on particular goals of a test to be performed. The fluidic circuit which is seen in Figure 26 and described in Example 9, comprises inlet and outlet ducts communicating with an operative cavity [not indexed; shown as the forth central cavity from the top] by means of respective valves. The operative cavity also communicates with two respective expansion chambers [the third and sixth central cavities from the top] and with at least two "substantially identical" trapping chambers connected to the corresponding ducts or / and to expansion chambers via respective diagonal channels ['distinct channels', 'connecting channels']. The bottom central cavity can be used as an incubation chamber. Mian also teaches in [0312] that the cavities process beads and / or magnetic particles covalently linked to DNA ['particles that form a support functionalized with a ligand']. Figure 26 further shows that each channel between the cavities includes at least one valve. The top and bottom central valves can function as

Art Unit: 1797

isolating means and means for retaining particles. Additionally, Mian teaches in [0102] [0160] , [0163], [0167] that the valves can be capillary valves ['valves with no moving parts'] and / or membrane valves ['isolating means taking two positions']. As to the functionality pertaining to the capillary valves, as recited in claims 24-25, all capillary valves inherently function exactly as recited. It is also noted that, since the capillary valves are not positively recited as a part of the instant invention as claimed, they are not accorded any patentable weight.

With respect to the means for heat exchange recited in claim 22 and means for dissociation recited in claims 33 and 35, Mian discloses heaters, which can be associated with any element of the fluidic circuit, in [0150].

Response to Arguments

9. Applicant's arguments filed on 02/02/2009 have been fully considered but they are moot in view of new grounds of rejection.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Natalia Levkovich whose telephone number is 571-272-2462. The examiner can normally be reached on Mon-Fri, 2 p.m.-10 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on 571-272-1267. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Jill Warden/
Supervisory Patent Examiner, Art Unit 1797